

JOKERZ!

Preliminary

OPERATIONS MANUAL
including
Essential Tables concerning
Game Operation &
Adjustments

Williams[®] 
ELECTRONICS GAMES, INC.

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JOKERZ Audit Table

Audit Item (Player 3)	Descriptive Phrases (Player 1 and 2 Displays)	Audit Factor 1 Value (Player 4)
AU 01	LEFT COINS [chute next to coin door hinge]	432
02	CENTER COINS	0
03	RIGHT COINS	398
04	PAID CREDITS	830
05	TOTAL PLAYS	
06	TOTAL FREE (Total Free Plays)	
07	PERCENT FREE (% Free Plays)	
08	REPLAY AWARDS	
09	PERCENT REPLAY (% Replay Awards)	
10	SPECIAL AWARDS	
11	PERCENT SPECIAL (% Special Awards)	
12	MATCH AWARDS	
13	HSTD (High Score to Date) CREDITS	
14	PERCENT HSTD (% HSTD Credits)	
15	EXTRA BALLS	
16	PERCENT EX. BALL (% Extra Balls)	
17	AV. BALL TIME (Average Time in Seconds)	
18	MINUTES OF PLAY (Minutes of Play)	
19	BALLS PLAYED	
20	REPLAY1 AWARDS	
21	REPLAY2 AWARDS	
22	REPLAY3 AWARDS	
23	REPLAY4 AWARDS	
24	1 PLAYER GAMES	
25	2 PLAYER GAMES	
26	3 PLAYER GAMES	
27	4 PLAYR. GAMES	
28	BURN IN CYCLES	
29	JACKPOT AWARDS (# of times "Jackpot" was awarded)	
30	1 MILLION AWARDS (# of "1 Million" shot awards)	
31	DOUBLE YER SCORE (# of "Double Yer Score" shot awards)	
32	MULTIBALLS (# of times for Multi-Ball™ play)	
33	EJECT'S SPECIAL (# of times Eject awarded Special)	
34	LANE EX. BALLS (# of Ex. Ball awards via Out or Return Lanes)	
35	ADVANCE X'S (# of times Bonus Multiplier advanced)	
36	EXTRA BALL LIT (# of times Ex. Ball was lit by Bonus Multiplier)	
37	BELLS COMPLETED (# of Ace - Ten completions for Special)	
38	SPECIAL LIT (# of times 5th Bell lit Special)	
39	H.S.RESET COUNTER	
40	0.0-0.4 MIL. SCORE (# of games <500K)	
41	0.5-0.9 MIL. SCORE (# of games ≥500K, <1M)	
42	1.0-1.4 MIL. SCORE (# of games ≥1M, <1.5M)	
43	1.5-1.9 MIL. SCORE (# of games ≥1.5M, <2.0M)	
44	2.0-2.4 MIL. SCORE (# of games ≥2.0M, <2.5M)	
45	2.5-2.9 MIL. SCORE (# of games ≥2.5M, <3.0M)	
46	3.0-99.9 MIL. SCORE (# of games ≥3.0M, <99.9M)	
47	H.S.T.D. 1> ??? (1st in HSTD Table, w/Initials)	
48	H.S.T.D. 2> ??? (2nd in HSTD Table, w/Initials)	
49	H.S.T.D. 3> ??? (3rd in HSTD Table, w/Initials)	
50	H.S.T.D. 4> ??? (4th in HSTD Table, w/Initials)	
51	AV. MIN. GAME TIME (Avg Game Time in minutes)	
52	LEFT DRAINS (# of drains via Left Outlane)	
53	RIGHT DRAINS (# of drains via Right Outlane)	
54	MILLION LIT (# of times "1 Million" shot was lit)	
55	CONSOL. EX. BALLS (# of Consolation Extra Balls awarded)	

NOTE:

1. The numbers shown in this column for Items 1 through 4 are examples.
 Entries for all items depend on the amount of play; thus, they will vary
 from location to location.

JOKERZ Game Adjustment Table

Adjustment Item (Player 3)	Descriptive Phrases (Player 1 and 2 Displays)	Factory Setting (Player 4)
Ad 01	AUTO REPLAY ¹ or FIXED REPLAY ¹	10 (%)
02	REPLAY START (or REPLAY LEVEL 1) ¹	SCORES ¹ 2,500,000
03	REPLAY LEVELS (or REPLAY LEVEL 2) ¹	01 (or OFF)
04	(REPLAY LEVEL 3) ¹	(see text)
05	(REPLAY LEVEL 4) ¹	(see text)
06	REPLAY AWARD	Credit
07	SPECIAL AWARD	Credit
08	MATCH FEATURE	10 (%)
09	BALLS / GAME	03
10	TLT WARNING	03
11	EX. BALL / B. I. P.	3/BIP
12	MAXIMUM CREDITS	10
13	HIGHEST SCORES	On
14	BACKUP HI. SCR.1	5,000,000
15	BACKUP HI. SCR. 2	4,500,000
16	BACKUP HI. SCR. 3	4,000,000
17	BACKUP HI. SCR. 4	3,500,000
18	HI. SCR.1 CREDITS	01
19	HI. SCR.2 CREDITS	01
20	HI. SCR.3 CREDITS	01
21	HI. SCR.4 CREDITS	01
22	H. S. RESET EVERY	3,000
23	FREE PLAY	NO
24	U.S.A. 1 COINAGE (1 COIN 1 PLAY) ^{2,3,6}	
25	LEFT UNITS	01
26	CENTER UNITS	04
27	RIGHT UNITS	01
28	UNITS/ CREDIT	01
29	UNITS/ BONUS	00
30	MINIMUM UNITS	00
31 - 48	Game-specific Adjustments (detailed in text and the Game Adjustment Setting Comparison Table)	
49 ⁴	CUSTOM MESSAGE	ON
50	DISPLAY AU (01 - 04)	YES
51 - 52	Game-specific Adjustments (detailed in text and the Game Adjustment Setting Comparison Table)	
53 - 58 ^{5,6}	Special Pricing Adjustments- See text for 53-58 details.	
59 ⁵	INSTALL ADDABALL	NO
60 ⁵	INSTALL 5-BALL	NO
61 ⁵	INSTALL NOVELTY	NO
62 ⁵	INSTALL EX. EASY	NO
63 ⁵	INSTALL EASY	NO
64 ⁵	INSTALL MEDIUM	NO
65 ⁵	INSTALL HARD	NO
66 ⁵	INSTALL EX. HARD	NO
67	AUTO BURN-IN	NO
68	CLEAR COINS	NO
69	CLEAR AUDITS	NO
70 ⁷	INSTALL FACTORY	NO

20P

25 01

26 06

27 14

28 02

NOTES:

1. Automatic Replay percentage value range is adjustable from 5 to 50%, via the Credit button. Item 02 permits changing the factory setting value for Replay Start Level (valid for next 500 games played). Item 03 permits setting up to four replay levels, with values as detailed in text describing item 03. For Fixed Replay Scores, set Auto Replay value to 1 less than 5(%) via the Credit button. Go to items 02, 03, 04, and 05; install their replay level scores. Turn off any replay level by setting 00 as its value.
2. Phrase in parentheses is Factory Setting. Phrase appears in player 2 and 4 displays. Press Credit button to change setting of the game pricing of item 24.
3. To change country OR coinage setting, press Credit button to obtain 16 Standard settings, followed by a Custom Setting. The Custom Setting activates items 25 through 30. When a Standard Setting is used, items 25 through 30 are set automatically, and cannot be changed.
4. To install Custom Message, press flipper button for alphabet and special characters. Press Credit button for next message letter or character.
5. Special Pricing Adjustment, whose effects are noted in the Game Adjustment text.
6. Refer to Pricing Table and text describing these items.
7. Approximates Ad 64, yet includes all factors listed in Factory Setting column, not just Ad 31 through 47 provided by Ad 64.

JOKERZ Lamp-Matrix Table

COLUMN	1 O66 YEL-BRN 1J7-1	2 O64 YEL-RED 1J7-2	3 O62 YEL-ORN 1J7-3	4 O60 YEL-BLK 1J7-4	5 O58 YEL-GRN 1J7-5	6 O56 YEL-BLU 1J7-7	7 O54 YEL-VIO 1J7-8	8 O52 YEL-GRY 1J7-9
O60 RED-BRN 1J6-1	BONUS (left) 1K 1	BONUS 10K (TR) 9	B of BET 17	Drop Target (BL) 25	Spinners 3,000 33	Hearts 41	JACKPOT ** 49	0.5 Million Jackpot (BG) 57
O61 RED-BLK 1J6-2	BONUS 1K 2	BONUS 50K 10	E of BET 18	Drop Target (BR) 26	Draw Poker 34	Spades 42	DEAL AGAIN 50	1.0 Million Jackpot (BG) 58
O62 RED-ORN 1J6-3	BONUS 1K 3	2X 11	T of BET 19	Drop Target (TL) 27	Special 35	Clubs 43	UPF Illum (left) 51	1.5 Million Jackpot (BG) 59
O63 RED-YEL 1J6-4	BONUS (right) 1K 4	3X 12	Left Outlane 20	Ace UPF 28	1 Bell 36	Diamonds 44	UPF Illum 52	2.0 Million Jackpot (BG) 60
O64 RED-GRN 1J6-5	BONUS 5K 5	4X 13	L Return Lane 21	King UPF 29	2 Bells 37	Left Ramp 45	UPF Illum 53	2.5 Million Jackpot (BG) 61
O65 RED-BLU 1J6-6	BONUS 10K (BL) 6	5X 14	R Return Lane 22	Queen UPF 30	3 Bells 38	Right Ramp 46	UPF Illum 54	3.0 Million Jackpot (BG) 62
O66 RED-VIO 1J6-7	BONUS 10K (BR) 7	6X 15	Right Outlane 23	Jack UPF 31	4 Bells 39	Left Jet's 10K 47	UPF Illum 55	3.5 Million Jackpot (BG) 63
O67 RED-GRY 1J6-8	BONUS 10K (TL) 8	7X 16	Double Scores (when Flashing) 24	10 UPF 32	5 Bells Lites Special 40	Right Jet's 10K 48	UPF Illum (right) 56	4.0 Million Jackpot (BG) 64

TL = Top Left TR = Top Right BL = Bottom Left BR = Bottom Right UPF = Upper Playfield BG = Backglass ** = 2 Lamps

JOKERZ Switch-Matrix Table

COLUMN	1 O45 GRN-BRN 1J8-1	2 O49 GRN-RED 1J8-2	3 O44 GRN-ORN 1J8-3	4 O48 GRN-YEL 1J8-4	5 O43 GRN-BLK 1J8-5	6 O47 GRN-BLU 1J8-7	7 O42 GRN-VIO 1J8-8	8 O46 GRN-GRY 1J8-9
1 WHT-BRN 1J10-9	Plumb Bob Tilt 1	Playfield Tilt 9	B of BET 17	BL 3-Bank DT (top) 25	33	TL 3-Bank DT (top) 41	Left Ramp Score 49	Lane Change Right 57
2 WHT-RED 1J10-8	C Side Power A/C Relay 2	Outhole 10	E of BET 18	BL 3-Bank DT (mid) 26	34	TL 3-Bank DT (mid) 42	Right Ramp Score 50	Lane Change Left 58
3 WHT-ORN 1J10-7	Credit Button 3	Ball Trough #1 11	T of BET 19	BL 3-Bank DT (bottom) 27	35	TL 3-Bank DT (bottom) 43	51	Draw Poker Home Backglass 59
4 WHT-YEL 1J10-6	Left Coin Chute 4	Ball Trough #2 12	Left Outlane 20	Ace UPF 28	BR 3-Bank DT (top) 36	TL Kicker 44	RAMP RAISE 52	Left Jet Bumper 60
5 WHT-GRN 1J10-5	Center Coin Chute 5	Ball Trough #3 13	Left Return Lane 21	King UPF 29	BR 3-Bank DT (mid) 37	Left Lock 1 Ball 45	10 pt (TR) 53	Right Jet Bumper 61
6 WHT-BLU 1J10-3	Right Coin Chute 6	Ball Shooter 14	Right Return Lane 22	Queen UPF 30	BR 3-Bank DT (bottom) 38	Left Lock 2 Balls 46	54	Lower Jet Bumper 62
7 WHT-VIO 1J10-2	Slam Tilt 7	Ramp UP 15	Right Outlane 23	Jack UPF 31	39	TR Eject 47	55	BL Kicker ("sling") 63
8 WHT-GRY 1J10-1	High Score Reset 8	Ramp DOWN 16	Double Score Target 24	10 UPF 32	40	Spinner 48	10 pt (BR) 56	BR Kicker ("sling") 64

TL = Top Left TR = Top Right BL = Bottom Left BR = Bottom Right UPF = Upper Playfield

JOKERZ Solenoid Table

Sol. No.	Function	Solenoid Type	Wire Color	Connections		Driver Trastr	Solenoid Part Number	
				CPU Bd	Playfield/Cabinet		Flashlamp Type	Insert Bd: p=Playfield
01A ³	Outhole Kicker	Switched	{Vio-Brn}	1P11-1	5J1-9: 5J4-9 (A)	Q33	AE-23-800	
01C ³	Left UPF/JO* (I) Flashers	Switched	{Blk-Brn}	(Gry-Brn)	5J5-9 (C)	Q33	#906/#89 flashlamps	1p,11
02A ³	Ball Release (Shr Lane Feeder)	Switched	{Vio-Red}	1P11-3	5J1-7: 5J4-8 (A)	Q25	AE-23-800	
02C ³	UPF/KE* (I) Flashers	Switched	{Blk-Red}	(Gry-Red)	5J5-8 (C)	Q25	#906/#89 flashlamps	1p,11
03A ³	Bottom Left 3-Bank Dr Tgt	Switched	{Vio-Om}	1P11-4	5J1-6: 5J4-7 (A)	Q32	AE-26-1200	
03C ³	UPF/RZ* (I) Flashers	Switched	{Blk-Om}	(Gry-Om)	5J5-7 (C)	Q32	#906/#89 flashlamps	1p,11
04A ³	Bottom Right 3-Bank Dr Tgt	Switched	{Vio-Yel}	1P11-5	5J1-8: 5J4-8 (A)	Q24	AE-26-1200	
04C ³	Right UPF/R* (I) Flashers	Switched	{Blk-Yel}	(Gry-Yel)	5J5-5 (C)	Q24	#906/#89 flashlamps	1p,11
05A ³	Top Left Kicker	Switched	{Vio-Gm}	1P11-6	5J1-4: 5J4-5 (A)	Q31	AE-23-800	
05C ³	DOUBLE SCORE (I) Flashers	Switched	{Blk-Gm}	(Gry-Gm)	5J5-4 (C)	Q31	#89 flashlamps	1p,11
06A ³	Top Left 3-bank Dr Tgt	Switched	{Vio-Blu}	1P11-7	5J1-3: 5J4-4 (A)	Q23	AE-26-1200	
06C ³	TL Dr Tgt/Top Jokers (I) Flashers	Switched	{Blk-Blu}	(Gry-Blu)	5J5-3 (C)	Q23	#906/#89 flashlamps	1p,11
07A ³	Bottom Left Locking Kicker	Switched	{Vio-Blk}	1P11-8	5J1-2: 5J4-2 (A)	Q30	AE-26-1500	
07C ³	BL Dr Tgt/Mid Jokers (I) Flashers	Switched	{Blk-Vio}	(Gry-Vio)	5J5-2 (C)	Q30	#906/#89 flashlamps	1p,11
08A ³	Knocker	Switched	{Vio-Gry}	1P11-9	5J1-1: 5J4-1 (A)	Q22	AE-26-1200	
08C ³	BR Dr Tgt/Lwr Jokers (I) Flashers	Switched	{Blk-Gry}	(Gry-Blk)	5J5-1 (C)	Q22	#906/#89 flashlamps	2p
09	On Cntr Ramp/Jackpot (I) Flasher	Controlled	Brn-Blk	1P12-1	5J2-9: 5J6-9: 2J4-3	Q17	#906/#89 flashlamp	11
10	Playfield/Insert Gnl Illum Relays	Controlled	Brn-Red	1P12-2	5J2-8: 5J6-8: 2J4-5	Q9	5580-12145-01	
11	Wheel (I) Flashers	Controlled	Brn-Om	1P12-4	5J2-6: 5J6-7: 2J4-6	Q16	#89 flashlamps	41
12	A/C Select Relay	Controlled	Brn-Yel	1P12-5	5J2-5	Q8	5580-09555-01	5
13	Wheel Coil B (I)	Controlled	Brn-Gm	1P12-6	5J2-4: 5J6-5	Q15	14-7948	
14	Wheel Coil A (I)	Controlled	Brn-Blu	1P12-7	5J2-4: 5J6-3	Q7	14-7948	
15	Cntr Ramp Motor	Controlled	Brn-Vio	1P12-8	5J2-2: 5J6-2	Q14	14-7944	
16	TR Eject	Controlled	Brn-Gry	1P12-9	5J2-1: 5J6-1	Q6	AE-23-800	
17	Left Jet Bumper	Special #1	Blu-Brn	1P19-7	5J3-7: 5J7-7	Q75	AE-23-800	
18	Left Kicker ("sling")	Special #2	Blu-Red	1P19-4	5J3-6: 5J7-6	Q71	AE-26-1500	
19	Right Jet Bumper	Special #3	Blu-Om	1P19-3	5J3-3: 5J7-3	Q73	AE-23-800	
20	Right Kicker ("sling")	Special #4	Blu-Yel	1P19-6	5J3-4: 5J7-5	Q69	AE-26-1500	
21	Lower Jet Bumper	Special #5	Blu-Gm	1P19-8	5J3-2: 5J7-2	Q77	AE-23-800	
22	In Cntr Ramp Flasher	Special #6	Blu-Blk	1P19-9	5J3-1: 5J7-1	Q79	#906 flashlamp	
-	Right Flipper	-	Om-Vio	1P19-1	2J3-1: 2J18-10: 7P1-15	-	FL11630/50VDC	
-	Lower Right Flipper	-	[Blu-Vio] ²		[7P1-16: 2J18-6: 2J17-4]	-		
-	Left Flipper	-	Om-Gry	1P19-2	2J3-2: 2J18-9: 7P1-18	-	FL11630/50VDC	
-	Lower Left Flipper	-	[Blu-Gry] ²		[7P1-19: 2J18-5: 2J17-3]	-		

Notes: 1. Wire colors, except flipper Om-Vio and Om-Gry, are ground connections (to coil terminal with unbarbed end of diode). Flipper Om-Vio and Om-Gry wires connect from CPU Board to flipper switch. 2. Flipper connections shown in braces are from flipper switch to flipper coil. 3. "A" circuits are pulsed, when Sol. 12 is de-energized; "C" circuits are pulsed, with Sol. 12 energized. Wire colors in brackets are those from respective A and C terminals corresponding to the J1-terminal connection listed for the Aux Power Driver Bd, which controls the device pulsing by Sol. 12. 4. Relay is mounted on Relay Bd, p/n C-11998-1. 5. Relay is mounted on Aux Power Driver Bd, D-12247 in the backbox.

JOKERZ Game Adjustment Setting Comparison Table

American & French Games							
Adj #	Adj Description	Extra Easy Ad 62	Easy Ad 63	Medium Ad (Factory) 64	Hard Ad 65	Extra Hard Ad 66	Not Applicable
33	MILLION Timer	7 sec	15 sec	12 sec	10 sec	8 sec	8 sec
34	2X SCORE Timer	OFF	OFF	OFF	20 sec	10 sec	10 sec
35	DBL YER SCORE Timer	25 sec	25 sec	20 sec	20 sec	15 sec	10 sec
36	CARD Memory	Yes	Yes	Yes	No	No	No
37	BELL Memory	Yes	Yes	Yes	Yes	No	No
38	Ex. Ball Memory	Yes	Yes	Yes	Yes	Yes	No
39	NEXT GAME Memory	Yes	Yes	Yes	Yes	Yes	Yes
40	SUIT Memory	Yes	Yes	No	No	No	No
41	DROP TGT Memory	Yes	Yes	Yes	Yes	No	No
42	MULTI-BALL Difficulty	Easy	Easy	Easy	Medium	Medium	Hard
43	JACKPOT Difficulty	Easy	Easy	Medium	Medium	Medium	Hard
44	JACKPOT Advance	20,000	10,000	5,000	5,000	5,000	5,000
45	LITE EX. BALL at	4X	4X	4X	5X	6X	7X
46	LITB SPECIAL In	3 Bells	3 Bells	4 Bells	4 Bells	5 Bells	5 Bells
47	Ex. Ball Percent	50%	50%	33%	33%	33%	33%
48	SPECIAL Percent	5%	5%	5%	5%	5%	5%
Adj #	Adj Description	Not Applicable	Extra Easy Ad 62	Easy Ad 63	Medium Ad (Factory) 64	Hard Ad 65	Extra Hard Ad 66
German & European Games							

WARNINGS & NOTICES

WARNING

FOR SAFETY AND RELIABILITY, WILLIAMS ELECTRONICS GAMES does not recommend or authorize any substitute parts or modifications of **WILLIAMS'** equipment. Use of Non-**WILLIAMS'** parts, or modifications of game circuitry, may adversely affect game play, or may cause injuries.

SUBSTITUTE PART OR EQUIPMENT MODIFICATIONS may void FCC Type Acceptance.

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WARNING

This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

WARNING

FCC STICKER. Check the back of your **JOKERZ** game to verify that an FCC-certification sticker was attached to your game at the factory.

All games that leave **WILLIAMS'** plants have been tested and found to comply with FCC Rules. Because the sticker is proof of this fact, legal repercussions to the owner and distributor of the game may result, if the sticker is missing. If you receive any **WILLIAMS** game, manufactured after December 1982, that has no FCC sticker, call **WILLIAMS** for advice or write us a note on your Game Registration Card. Be sure that the card bears your game's serial number.

RF Interference Notice

CABLE HARNESS PLACEMENTS and ground strap routing on this game have been designed to keep RF radiation and conduction within levels accepted by the FCC Rules.

TO MAINTAIN THESE LEVELS, reposition harnesses and reconnect ground straps to their original placements, if they become disconnected during maintenance.

Notice

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FOR SERVICE...

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WARNING: Transport this game **ONLY**
with hinged backbox **DOWN!**